

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) An analyte sensor for implantation in a body, the sensor comprising:

a substrate with notches cut in the substrate to form a necked down region in the substrate; and

at least one sensor electrode formed from one or more conductive layers, wherein the notches cut in the substrate do not expose the at least one sensor electrode to analytes.

2. (Previously presented) A sensor in accordance with claim 1, wherein the thickness of the substrate ranges from approximately 25 μ to 350 μ .

3. (Previously presented) A sensor in accordance with claim 1, wherein the thickness of the substrate ranges from 5 μ to 750 μ .

4. (Previously presented) A sensor assembly in accordance with claim 1; further including:

a slotted needle having a slot; and

wherein the notches creating the necked down region that allows the substrate to slide into the slotted needle that has the slot narrow enough to permit passage of the necked down region, but prevents a non-necked down region of the substrate from pulling out of the slotted needle through the slot.

5. (Previously Presented) A sensor assembly in accordance with claim 4, wherein the slot of the slotted needle permits the necked down region of the substrate to slide down the slot.

6. (Previously presented) A sensor in accordance with claim 1, wherein a width of the substrate in the non-necked down portion is sized to fit within a slotted needle having a diameter smaller than 21 gauge.

7. (Previously presented) A sensor in accordance with claim 6, wherein a width of the substrate in the non-necked down portion is sized to fit within a slotted needle having a diameter smaller than 22 gauge.

8. (Previously presented) A sensor in accordance with claim 7, wherein a width of the substrate in the non-necked down portion is sized to fit within a slotted needle having a diameter smaller than 23 gauge.

9. (Previously presented) A sensor in accordance with claim 8, wherein a width of the substrate in the non-necked down portion is sized to fit within a slotted needle having a diameter smaller than 24 gauge.

10. (Previously presented) A sensor in accordance with claim 1, wherein at least one of the at least one sensor electrode is formed on a first surface of the substrate.

11. (Previously presented) A sensor in accordance with claim 10, wherein all of the at least one sensor electrode are only formed on the first surface.

12. (Previously presented) A sensor in accordance with claim 10, wherein at least another one of the at least one sensor electrodes is formed on a second surface of the substrate.

13. (Previously presented) A sensor in accordance with claim 12, wherein a third one of the at least one sensor electrode is a reference electrode configured to contact a skin surface.

Claims 14-88 (Canceled)

89. (Previously presented) A sensor set comprising:

- a) a mounting base adapted for mounting onto a patient's skin;
- b) a sensor as claimed in claim 1; and
- c) an insertion needle carried by the mounting base to protrude from the mounting base and having at least a portion of the sensor nested within the insertion needle, the insertion needle defining a longitudinally extending slot along one side to permit sliding withdrawal of the insertion needle from the mounting base and the nested portion of the sensor and to accept the necked down region of the substrate.

90. (Previously presented) The sensor of claim 1, wherein the notches are cut in the width of the substrate to form the necked down region of the substrate.